

# Installation Manual

Dynamic 4



Exclusively Distributed by



## PLEASE READ PRIOR TO INSTALLATION



Before installation of this projection screen you should fully read these instructions to ensure you are aware of the full installation procedure. In addition to the screen and accessories and in order to carry out the installation you will need:

- Spirit Level
- Philips Screw Driver
- Suitable screw fixings of at least 40mm long if the wall which is being fixed into is not a wooden structure.

In the Installation accessories you will find:

- **White Cotton Gloves to be used at all times when handling the white screen fabric**
- Fabric Installation tool
- Hex Keys

It is recommended that at least 2 or more people install the screen as larger screens can be heavy and awkward to lift. Good lifting practices and lifting aids should be used as required to aid installation.

### Important Notes

The symbols below show important notes that must be read and understood at each stage of installation




= Warnings (Safety or Installation Quality)





= Information (Installation requirements or tips)

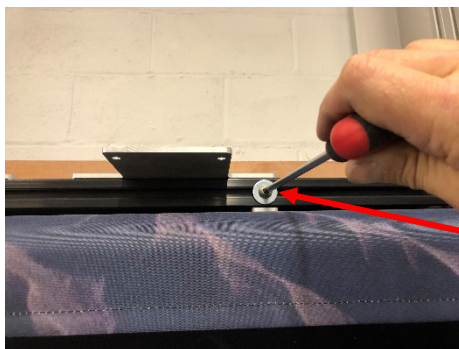
## Unpacking

Each screen is carefully packaged in our factory to ensure that it reaches you in perfect condition. The parts may be screwed down the crate they are shipped in and these screws must be removed prior to removal from the crate.

 Do not unpack each piece from its protective packaging until you are ready to install it. This will ensure that you do not damage any of the velvet finished pieces accidentally during installation.

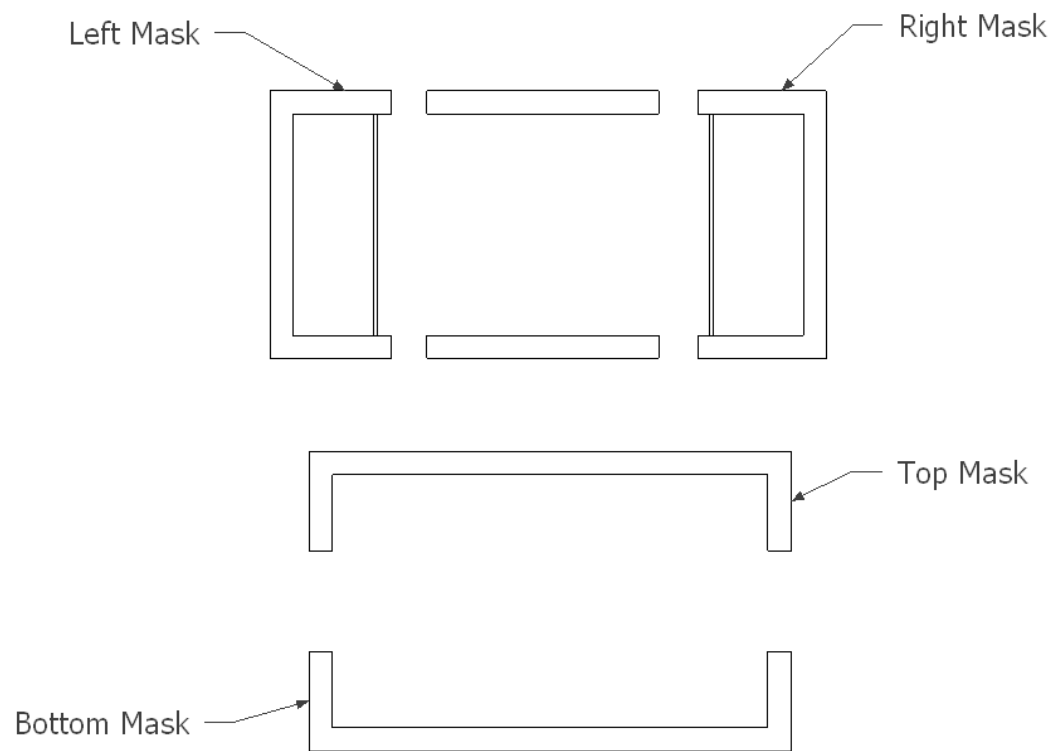
 Note that the Dynamic 4 is designed and recommended to be assembled on the wall so that a clear floor area big enough to build the screen is not required. However, it can also be built on the floor if preferred you will just need to follow the same instructions but substitute the wall for the floor then lift and attach the screen to the wall once built. DO NOT build the screen face down on the floor under any circumstances as this will result damage to the screen and mechanism.

 **The top and bottom masks will ship fastened to the rear top and bottom screen sections to ensure that they are protected during transit. In order to remove them from the crate and for installation remove each of the M8 locking bolts (6 in each). You will need to keep these bolts and washers for re-installation.**



Locking bolts

The screen is a 8 part frame. Two 'C' sections (the left and right mask), a top and bottom section. (These together with the left and right fit to the wall to form the basis of the screen. The top and bottom masks then attach to the rest of the frame to create the full screen. The Velvet covers then go over the screen frame to complete the installation.



*Frame Section Configuration Fig. 1*

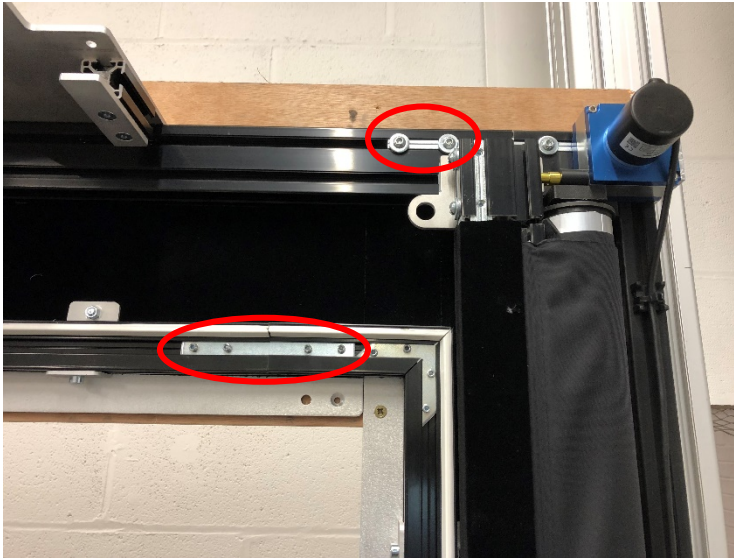
## Installation

- Decide on the height you want the bottom of your finished screen to be from the finished floor level (FFL). Now add 240mm from the FFL to bottom of screen height and mark a level line on the wall at this height. This will be the height of the top of the back plate on the bottom screen section.
- Now mark the central left to right point for the screen (normally the centre line of the room. This will be the centre of the Bottom screen section.
- Now using these lines to position the bottom section of screen labelled 'BOTTOM' fix this to the wall using 40mm screws to fix to the wall behind. DO NOT OVERTIGHTEN THESE. They should just be tightened loosely at this stage otherwise you will find it difficult to connect the other sections of the screen. Use a spirit level to ensure that this section is level and central. **This is very important as it will form the basis for the rest of the screen to be built to.**



- Prepare the left end section to be fitted. There are two joining sliders which join the bottom section and left section. These can be secured in place using the grub screws to stick out of one of the profiles half way.
- Now lift the left section and mate the joining slider into the respective profile until the two ends of the profile meet fully. (you may need to help line up the white bearing slider of the mask bar to help locate it in the groove on the bottom frame as you do this).
- Using a spirit level, ensure that the left side section is vertical.
- Screw the left section to the wall using the fixing holes in the back plate.

- Tighten the grub screws in both joining sliders ensuring the aluminium section meet.



*Example of joining slider fixing points at each corner of screen.*

- Now fix the 'TOP' screen section in exactly the same way again tightening the joining sliders and using a spirit level to check the level. Also fix the 40mm screws at either end of the main.

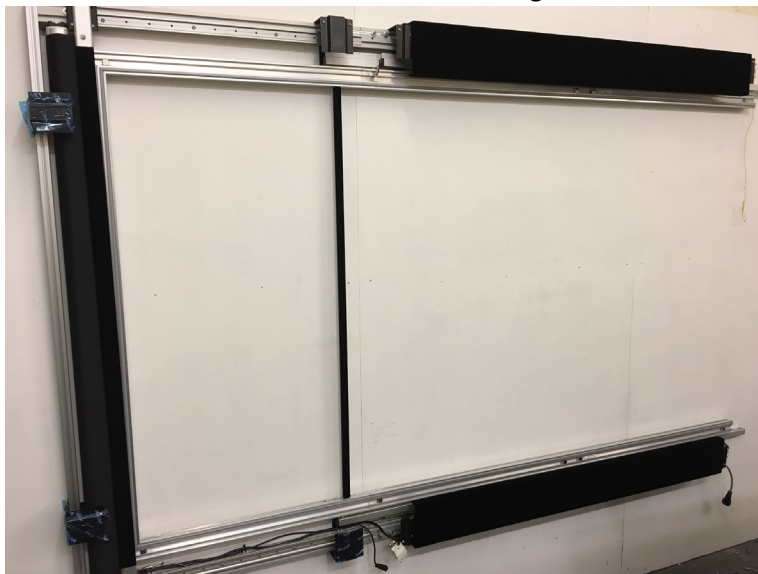


Ensure that the top mask has been removed from the top screen section during unpacking as per previous instructions.




You can use the stretcher bars to ensure that you have the correct spacing between the top and bottom screen sections. Fit the stretcher bar to the bottom section of screen and rest the top section of screen against it during installation. The top screen section must be held up by the installer until fixed in place and not held up by the stretcher bar. This is a guide only.

You should now have 3 sections fixed looking like this:



*Note that this image is of a Dynamic 2. On a Dynamic 4 you will not have the velvet top and bottom cover fitted at this point.*

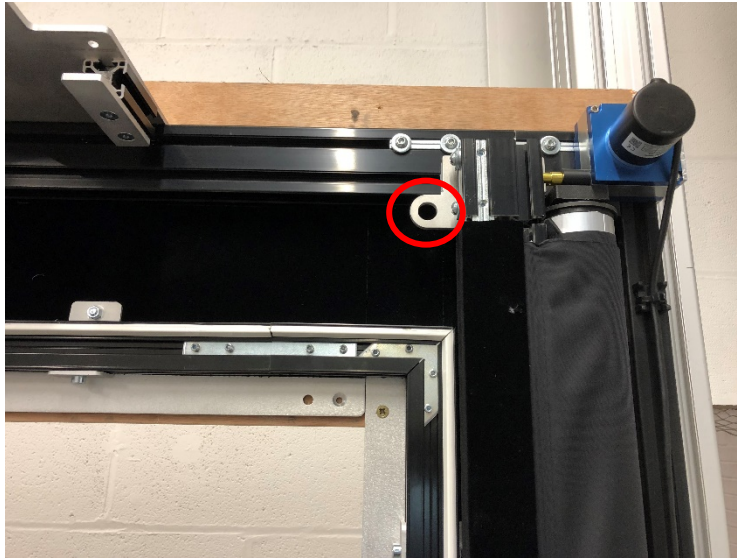
- Fix the Right section to the top and bottom sections again with the sliders ensuring that you tighten the grub screws and the fixing screws.
-  **You may have to slacken the screws on the top section while aligning the Right section to ensure that the joining sliders are able to fully engage. Ensure that the ends of the two sections meet fully together.**
- Mechanically you now have all the main section sections fitted to the wall.



## Mask Connections

The masks are tensioned via large spring mechanisms in the top and bottom sections (black tension springs with carabiner end fittings).

- Hook one end of the longer set of tension springs onto the loop in the mask plate at the top of the mask bar. Pull the hook at the other end towards the opposing mask taking care not to release the hook as it will be under spring tension. Once you have pulled it right the way out to the mask hook the hook onto the mask plate of the opposing mask.




- Repeat this for the springs at the bottom of the mask bars.
- Ensure that the masks are both now under tension and that no wiring has become loose in transit or during installation that will impede the travel of the mask bar along the linear bearing track it travels on.



## Electrical Connections

- At the joint points of the screen there are electrical connections to be made. The mask power and the smaller sensor connection. The mask power simply pushes together. The sensor cable is on a simple M12 Screw sensor cable. Simply connect this and screw together the connector to lock.



 Ensure that the electrical connections for the Side masks and the tension springs are all in place before you fit the top and bottom masks

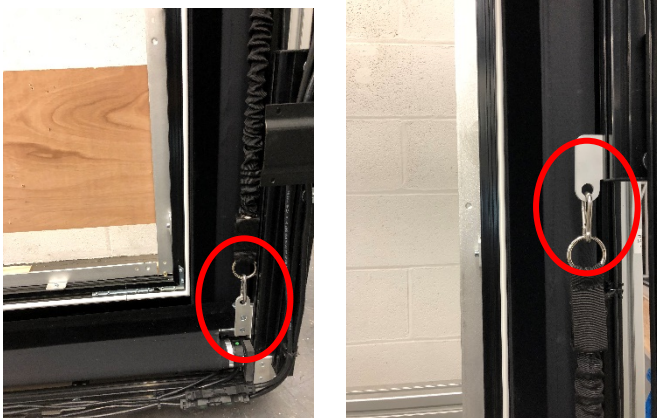
### Fitting the Top and Bottom Masks

- Next you need to fit the bottom mask. The bottom section fits onto the aluminium brackets and behind the black steel brackets on the bottom section. (this is as the screen parts were shipped)
- Lift the bottom mask into position down behind the black steel plates. Ensure that the holes in the mask frame and the fixing points behind line up.
- Fix into position using the 6 x M8 bolts with large washers.
- Fix the sides of the bottom mask into the side sections of the screen frame using 2 of the M8 bolts and washers provided.



*Tighten all M8 bolts to attach the Top/Bottom Mask.*

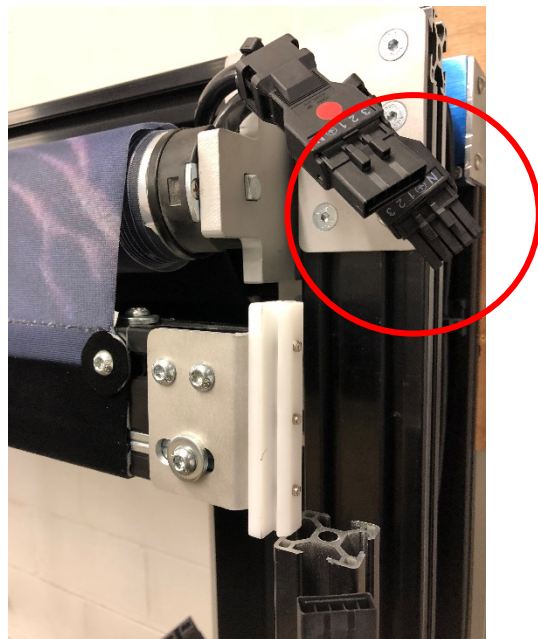
- Fit the bottom mask spring tensioner. This is connected to the loop at the end of the bottom mask and then onto the loop on the frame of the top mask above (note **not** connected to the top mask bar). The top mask is under gravitational tension only.



- Now in the same way you fitted the bottom mask, fit the top mask ensuring that you tighten all the M8 fixing bolts. Due to gravity pulling down on the top profile larger screens will need 2-3 people top hold the top mask profile up while the locking bolts are attached.

## Electrical Connections

- At the ends of the top and bottom masks there are more motor and sensor cable to connect of the screen there are electrical connections to be made for the top and bottom masks and the sensor cables. Connect these in the same way you did on the side masks.



- Care should be taken to ensure that the connections are connected correctly according to the colour coding on the plugs.
- Ensure that all the electrical connectors on the screen are connected at this stage.

### Screen Covers – *(Not Included on In Wall Models)*

The black velvet screen covers are magnetic and fit to the black bracket supports around the screen to complete the installation of the screen

- First fit the two top straight sections of the screen working out from the centre of the screen. The sections are simply held in position with the making of the magnets with the black steel plates. Each velvet section is labelled with its location on the screen.
- Next fit the Bottom straight sections again starting from the centre of the screen. Not that these have aluminium supports on the inside which seat on top of the steel plates to prevent the magnets sliding down at all.
- Now fit the bottom left and bottom Right 'L' section covers ensuring that all joints are aligned. Any misalignment can be easily resolved by sliding the covers on the magnet fixings to ensure perfect joints.
- Now fit to top left and right 'L' sections in the same way to complete the frame.

## Electrical Operation



Test all electrical operation before fitting the screen fabric

- Power on the electrical control panel
- The main control screen will be visible on the touch screen once it has booted up.



- To start operation press 'Home' this will set the masks to their home position (just covering the edge of the screen surface but showing the full width aspect of the screen).
- Now press 1.78 this will move the masks to a 16/9 image size.
- Cycle between Home and 1.78 2-3 times just to initialise the masks and ensure that everything centralises in the mask runners following transit.



If at any time a mask sticks during this initialisation procedure and becomes slack, hit stop and then manually push the mask bar towards the middle of the screen slightly. This will free it and continue with the initialisation sequence.

- The screen is now ready for operation and external RS232 control of operation.

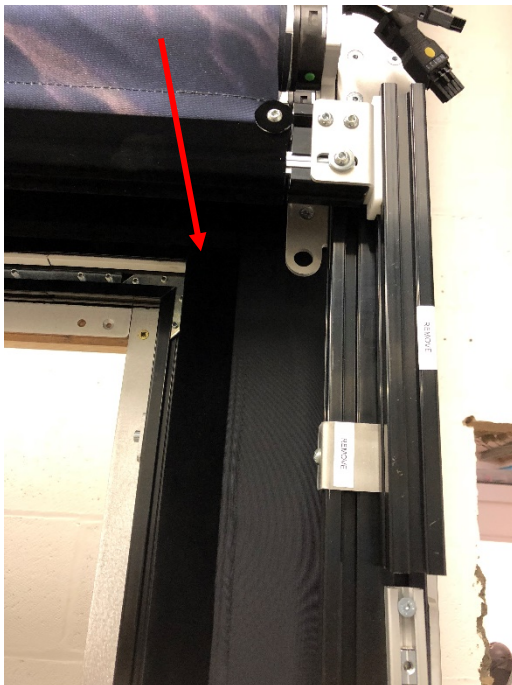
## Fabric Installation

Your screen is delivered with two fabrics; the black backing fabric and the main screen fabric. The first one to be installed is the black backing fabric.



Care and time should be taken during handling and installation of the fabric. On larger screens you will need 2 people to complete this task.

- Take the roll of fabric (White for AT POP and Black for AT WOW) and the fabric installation tool. Start to unroll the fabric from the roll by about 500mm. Holding the top corner of the fabric in one hand, line it up with the top left hand corner of the screen so that the edges of the fabric are in line with the outer edges of the screen frame.
- With the fabric tool push the tool onto the fabric and down into the white plastic fabric retaining track.

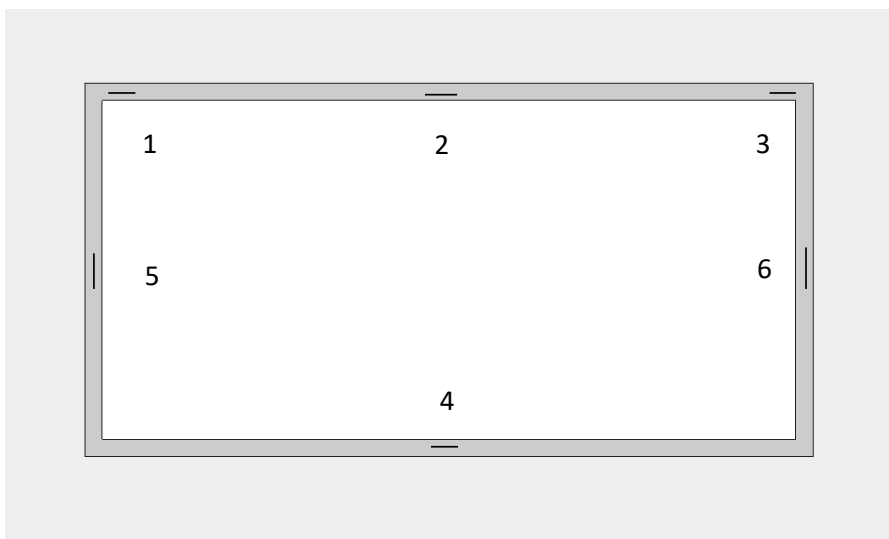


You may want to try pushing the fabric tool into the fabric retaining track without any fabric first to get a feel for where it goes in and how much force is required. you may need to get help holding the mask bar out of the way slightly while they are under tension.



*Retaining track insertion point Fig. 8*

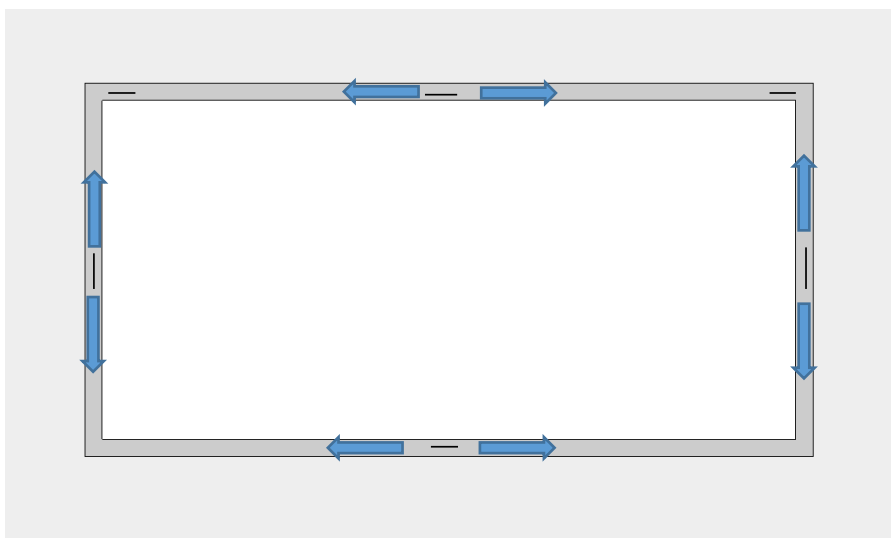
- Now unwind enough fabric from the roll to take you to the middle of the screen. Again ensuring that the top of the fabric is in line with the top of the screen push the fabric into the fabric retaining track in the centre of the top rail of the screen.
- Now unroll enough of the remainder of the backing fabric to cover the screen and repeat the process of tucking the fabric into the top right of the screen.
- You should now have the fabric hanging from the three tucked points on the top of the screen.
- Now using one hand apply a little bit of tension to the fabric at the bottom in the middle and then using the fabric installation tool tuck fabric into the centre bottom of the fabric retaining track.
- Now repeat this process on in the centre of the left and then right sides. See Fig.9.



*Fabric Tuck Order Fig. 9*

- Now continue to tuck in the fabric along the length of the retaining track working out from each central tuck. Only tuck max 300mm at a time in each direction and then go to the opposing side and tuck the same amount. This will ensure an even stretch across all the fabric.





*Direction of fabric Tucking Fig.10*

- Continue this process until you reach the corners of the screen. You may have to pull out the original tucks in the top left and right corners and re-tuck them to ensure that you have no wrinkles in the fabric.
- Ensure that you are happy that the fabric is flat and wrinkle free.
- Using sharp scissors cut the excess fabric off on the outside of the fabric retaining track leaving a 15mm – 20mm excess.
- Work around the screen to push this excess down into the fabric retaining track. It is best to do this in the same manner as the original tucks working out from the centres until all the excess is tucked in.
- Now repeat the exact same process you have just done for the backing to install the white projection fabric. Ensure that you have the 'FACE SIDE' label of the fabric facing out in the room as this will be the side the projector will project onto.



**Ensure that you use the white cotton gloves to handle the white projection fabric at all times and keep it away from dust or dirt as it can easily be marked.**